

**REMARKS**

Claims 1-19 are pending in the present application. Claims 1 and 17 are independent.

**Claim Rejection – 35 USC 102**

Claims 1, 17, and 19 have been rejected under 35 U.S.C. 102(b) as being anticipated by Kalb, Jr. (U.S. Patent 5,760,581). Applicants respectfully traverse this rejection.

Claims 1 and 17 had been amended to add the limitation,

“so that a driving current driving at least one Hall device of the plurality of Hall devices is a current adjusted amount of a driving current driving another Hall device through a corresponding terminal of the plurality of terminals.”

The rejection presents an argument that, in the above stated limitation, the limitation “could be interpreted to describe the constant supplies providing an additional current to each of the Hall devices, as shown in Fig. 1, it could also be easily interpreted to describe the invention of Kalb, Jr. wherein a current adjusted amount could be due to a current drop in the Hall device and the output current then drives the next Hall device.”

Applicants submit, however, that the rejection and further argument fails to address the claimed limitation in the context of the claim as a whole. In particular, Applicants submit that Kalb, Jr. fails to teach the structural limitation of “a driving current ... is a current adjusted amount .. through a corresponding terminal of the plurality of terminals,” in the context of a

plurality of terminals applying a bias voltage to a plurality of Hall devices connected in series. Kalb's figure 4 does not teach a plurality of terminals for applying a bias voltage to a plurality of Hall devices connected in series. Even if it could be said that the daisy chain coupled triple drain MagFET's constitute a series connection, which Applicants do not concede, the device does not consist of a plurality of terminals for applying the bias voltage. Rather, Kalb teaches at most a single terminal that supplies a reference voltage. Thus, at least for this reason, Applicants submit that Kalb, Jr. fails to teach each and every claimed limitation.

Further, with respect to the argument presented in the rejection, Kalb, Jr. specifically states that, "With the configuration shown in Fig. 4, the center drains and sources of each triple drain MagFETs are permitted to float to the proper voltage potential as described earlier without current flowing between each of the devices." Kalb, Jr. at column 5, lines 4-8. Thus, Kalb, Jr.'s current sources serve to permit each triple drain MagFET to float to a proper voltage, but do not, as in the claimed invention, serve to adjust the current driving another Hall device, i.e. because there is no current flowing through each of the devices. Thus, at least for this additional reason, Applicants submit that the rejection fails to establish *prima facie* anticipation.

Even if it could be said that the claim could be interpreted as wherein a current amount could be due to a current drop in the Hall device and the output current then drives the next Hall device, Applicants submit that the claimed structure is not inherent in Kalb, Jr.

It has been held that, "The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). To support the rejection on the basis of anticipation, the recited condition or feature must necessarily occur or be present in the prior art. Applicants submit that the Examiner's argument is merely that a condition "could" occur. Thus, insufficient evidence has been presented to make a case of inherency. Therefore, at least for this additional reason, Applicants submit that the rejection fails to establish *prima facie* anticipation.

Accordingly, Applicants respectfully request that the rejection be withdrawn.

### **Claim Rejection – 35 USC 103**

Claims 2-11, 14 and 15 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kalb, Jr. and Foster (U.S. Patent 4,833,406). Applicants respectfully traverse this rejection.

The Office Action admits that Kalb, Jr. does not disclose supplying a constant bias voltage to each of the terminals. The Office Action instead relies on Foster for teaching the missing constant voltage supply section. Foster does appear to teach a constant voltage driving system for a Hall device. Similar to the known system shown in Figure 7 of the present drawings, Foster's device is not temperature dependent (Foster: column 2, lines 48-55). Furthermore, Foster's device includes one voltage regulator for one Hall device. However, like Kalb, Jr., Foster's device also fails to teach a plurality of Hall devices connected

in series in combination with a constant voltage supply section for supplying a constant bias voltage to each of the plurality of Hall devices. In Foster's device, the Hall devices are connected in parallel. Thus, in either Kalb, Jr. or Foster the system would require a driving current in proportion to the number of Hall devices. Therefore, Foster fails to make up for the deficiencies in Kalb, Jr.

As mentioned above, the present claimed invention includes a plurality of Hall devices connected in series in a constant voltage type driving system. Having the series connected Hall devices enables operation at a constant current even over a large number of Hall devices. Neither Kalb, Jr. nor Foster address such a capability.

Accordingly, at least for this additional reason, Applicants submit that the rejection fails to establish *prima facie* obviousness for claims 2-11, 14, and 15.

#### **Allowable Subject Matter**

The Examiner is thanked for indicating that claims 13 and 16 contain allowable subject matter.

#### **CONCLUSION**

In view of the above amendments and remarks, reconsideration of the various rejections and allowance of claims 1-19 is respectfully requested.

Should the Examiner have any questions concerning this application, the Examiner is invited to contact Robert W. Downs (Reg. No. 48,222) at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully Submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By: 

Charles Gorenstein

Reg. No. 29,271

P.O. Box 747

Falls Church, VA 22040-0747

(703) 205-8000

*RWD*  
CG/RWD/sjl